IN THE SPECIFICATION:

Please amend the paragraph starting at page 1, line 20 and ending at line 26, as follows:

--The positioning resolving power requires an accuracy in the order of several nm, consonant ~~along~~ with the increase in density of an HDD. To realize such positioning in ~~on~~ the order of several nm ~~order~~, a resolving power and stability greater ~~more~~ than those of a laser interferometric measuring machine are required. In recent years, a grating interference rotary encoder ~~is~~ has been used.--

Please amend the paragraph starting at page 2, line 14 and ending at line 21, as follows:

--Hence, the movement of the head arm 9 matches that of the pushrod 5. When vibration by rotation of the hard disk is transmitted to the head arm 9 and then to the motor 2 through the cylindrical surface of the pushrod 5, highly accurate positioning by the rotary positioner system is impeded so as to deteriorate the writing performance for information, such as servo track signals at a high density.--

Please amend the paragraph starting at page 5, line 15 and ending at line 26, as follows:

--Fig. 2 is a view showing the arrangement of an optical displacement detection apparatus according to an embodiment. A collimator lens 12, a non-polarization beam splitter 13, an objective lens 14, and a crystal plate 15 are arranged in the emission direction of a light beam from a semiconductor laser source 11. A polarizing prism 16 is arranged in the reflection direction of the non-polarization beam splitter 13. A light receiving element 17 is arranged in the reflection direction of the polarizing prism 16, and a light receiving element 18 is arranged in the transmission direction of the polarizing prism 16.--

Please amend the paragraph starting at page 5, line 26 and ending at page 6, line 1, as follows:

--A head arm 20, the movement of which is to be measured, ~~measured~~ is arranged under the crystal plate 15.--

Please amend the paragraph starting at page 8, line 22 and ending at page 9, line 12, as follows:

--The displacement is detected on the basis of changes in signal levels of the two signals. More preferably, the difference signal between the two signals is detected, and a predetermined level Vf near the zero-cross point is defined as a reference position, as shown in Fig. 6. When the slit-shaped marking M relatively shifts to the left or right, the signal level rises or drops. When the slit-shaped marking M moves by the width d, the signal level changes from the maximum value to the minimum value. For example, when the marking width d is set at 5 μm, and the signal level is divided into 4,096 steps using an A/D converter, a resolving ~~an~~ ~~resolving~~ power of about 1.25 nm can be obtained. When not the whole signal level but only the signal level of 1.0% near the zero-cross point is divided into 4,096 steps by the A/D converter, a resolving power about 10 times higher (0.125 nm) can be obtained.--

Please amend the paragraph starting at page 9, line 18 and ending at page 10, line 1, as follows:

--Fig. 7 is a view showing an embodiment in which the optical displacement detection apparatus of the above embodiment is applied to a servo pattern recording apparatus for an HDD. A rotary positioner 24 formed from an encoder 22 and a motor ~~motor~~ 23 is arranged above an HDD housing 21. An optical displacement detection apparatus 26 according to the above embodiment is attached to the distal end of a rotary arm 25. The center of the rotating shaft of the rotary positioner 24 preferably matches the central axis of rotation of a head arm 20 in the housing 21.--

Please amend the paragraph starting at page 10, line 4 and ending at line 16, as follows:

--The detection apparatus 26 of this embodiment has an outer size of about 20 mm and is very compact. The apparatus does not adversely affect rotary positioning control of the rotary positioner 24 by a computer 28 and a control ~~control~~ system 29. The signal from the detection apparatus 26 is input to an A/D converter in the computer 28 through a junction circuit. In the computer 28, the numerical value of the A/D converter is monitored. If a displacement is detected, a rotation instruction is issued to an HDD voice coil motor 30 connected therewith. A control system 31 is formed for the purpose of canceling the generated displacement.--

Please amend the paragraph starting at page 12, line 21 and ending at page 13, line 6, as follows:

--(iv) In the above embodiment, the reflected light beam from the two illumination light beams is split by the polarizing prism 16, and the respective light beam components are sent to ~~the~~ separate light receiving elements 17 and 18. However, as shown in Fig. 9, instead of separating the light receiving elements 17 and 18, they may be formed into a 2-division photodiode to directly receive the light beams. In this case, when polarizing plates 31 and 32 are inserted immediately before the light receiving elements 17 and 18, the signals of the respective polarized light components can be detected, and the optical system can be very simple and easily assembled ~~in easy way~~.--

Please amend the paragraph starting at page 13, line 7 and ending at line 15, as follows:

--(v) In the above embodiment, the displacement detection apparatus is applied to an HDD servo pattern recording apparatus. The displacement detection apparatus can also be applied to the origin detection optical system of an optical encoder. For example, as shown in Fig. 10, the slit-shaped marking M is formed on the rotary encoder <u>disk D'</u> ~~disk D~~, portions that are spatially shifted are illuminated with two light beams, and the reflected light beams are received.--

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Please amend the paragraph starting at page 15, line 12 and ending at line 25, as follows:

--At a cross point X1 between the reference level Vf and the light receiving element 18, the incident light amount onto the light receiving element 17 is minimum. When the boundary portion moves by a focusing light beam width w, the signal level changes from the maximum value to the minimum value. For example, when the focusing light width w is set at 5 μm, and the signal level is divided into 4,096 steps using an A/D converter, <u>a</u> ~~an~~ resolving power of about 1.25 nm can be obtained. When not the whole signal level but only the signal level of 10% near the zero-cross point is divided into 4,096 steps by the A/D converter, a resolving power about 10 times higher (0.125 nm) can be obtained.--

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Please amend the paragraph starting at page 17, line 5 and ending at line 11, as follows:

--When both <u>of the</u> two light beams deviate from the two boundary portions of the head arm 20, the reflected light amounts of both the light receiving elements 17 and 18 are zero. <u>In order not</u> ~~Not~~ to detect this <u>state,</u> ~~state, a~~ determination means for determining whether

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the signal level of the light receiving element 17 exceeds the reference level Vf in Fig. 14 is added.--

Please amend the paragraph starting at page 18, line 10 and ending at line 16, as follows:

--(a) A marking can be formed on the upper surface of the head arm simply ~~only~~ by a process of forming a scribe line. A boundary portion can be formed simply ~~only~~ by providing a metal element having a different reflectance. Alternatively. instead of forming a marking, the metal element to be detected itself can be used. The arrangement is very simple and easy.--

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Please amend the paragraph starting at page 18, line 24 and ending at page 19, line 4, as follows:

--(c) Since a point near the zero level of the signal difference from two points that are separated by a small distance is used as a reference, ~~the~~ variation in reflectance of the head arm rarely has any ~~few~~ influence, and the processing is stable. In addition, since a variation in scribe line state or a fluctuation in illumination light beam rarely affects the difference signal, the signal can be stably detected.--

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